

Indiana Breast Cancer Research Center

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Abstract

IUPUI is now positioned to take advantage of the breast cancer research related infrastructure that has been built on this campus over the last 9 years by establishing the *Indiana Center for Breast Cancer Research*. It is our intention to build on our unique research and clinical translational strengths to create a center of excellence dedicated to the prevention, early detection, and treatment of breast cancer. 16 basic and clinical investigators at IUPUI form the faculty of the Center. The charge of this Center is the rapid movement of laboratory discoveries into the clinic. To do this the Indiana Center for Breast Cancer Research seeks to understand the biology underlying breast cancer, to apply this understanding of breast cancer biology to improve prevention, diagnosis, and treatment, and to foster research that is interdisciplinary and translational in nature. To identify the molecular, biochemical and physical events that underlay the development and maintenance of breast cancer and to apply these findings to enhance the prevention, diagnosis and treatment of the disease requires a multidisciplinary approach encompassing basic and clinical science expertise. To facilitate this, the Director of this Center identified a very strong team of dedicated breast cancer investigators that span the clinical translation arena, and include: structural biology, gene expression, pathology, animal models, proteomics, genomics, biostatistics and bioinformatics. *The research to be pursued by the Center faculty is conceptually linked in that each investigator is engaged in the study and discovery of breast cancer molecular phenotypes. The unique feature of this Center in the National breast cancer research field will be the **novel molecular and therapeutic pathways and approaches** pursued by the Center investigators. The breast cancer work to be carried out by the investigators will be exclusive to the Center and the first of its kind in the Nation.* The spectrum of studies performed includes the development of novel agents, technologies, and markers for the better diagnosis, prognosis, screening, prevention, and treatment of breast cancer. Another overarching goal of the Center is that it serves as the starting and focal point for a planned application to the National Cancer Institute (NCI) to establish a Breast Cancer Specialized Program of Research Excellence (SPORE) here on the IUPUI campus. (There has never been a SPORE for any type of cancer at any of the IU campuses or within the State of Indiana). The Indiana Center for Breast Cancer Research will permit the growth of a sharply focused multidisciplinary program that will form the basis of the research and infrastructure required to successfully compete in the highly competitive process of securing a NCI SPORE for breast cancer. We estimate that establishment of the Indiana Center for Breast Cancer Research will permit us to submit a NCI SPORE application in the next 2 – 3 years.